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# W9JF

APRIL - 1965  
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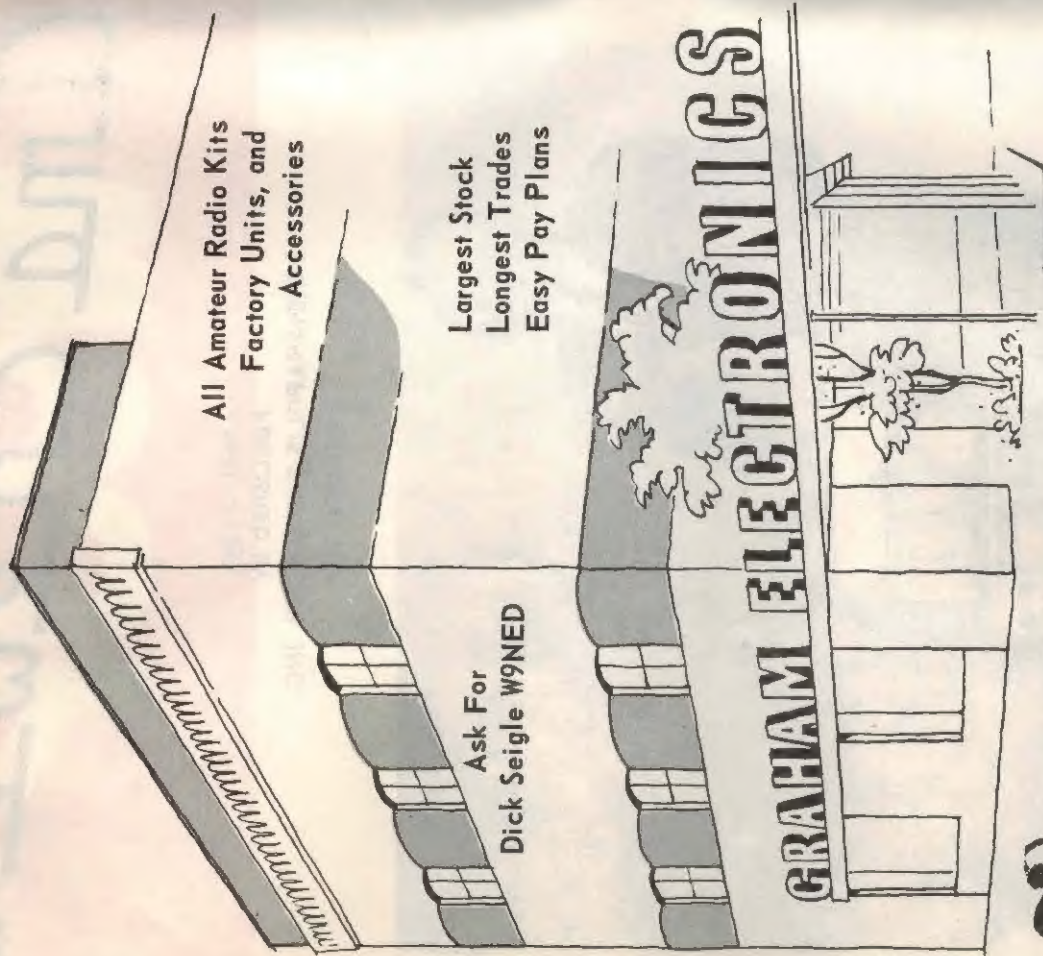
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# HAM HEADQUARTERS



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FREE LISTING OF USED HAM EQUIPMENT ON REQUEST

The Indianapolis Radio Club meets on the second and fourth Fridays of each month except July and August in the Indianapolis Park Board Building at 29th and Harding Streets. Meetings start promptly at 8:00 P.M., EST.

## AMA-CHEWER STAFF

PRESIDENT	Bert Brouse 6995 Barr Will Drive	K9JSF CL 5-9282
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\*\*\*\*\*

Ama-Chewer is published monthly by and for the I.R.C. and all amateurs in the Indianapolis area. Non-members may subscribe for \$1.00 a year.

Publication is on the third Friday of each month, with all news items and ads due no later than the first Friday of each month.

Ham Ads (5 line limit) are free to members and subscribers. Others may submit ads for 50 cents each.

Ama-Chewer welcomes the forwarding of information on coming events and activities of other clubs for publication.



## THE PRESIDENT'S FREQUENCY

In last month's "president's frequency" report I started out by saying that the month of January had passed and February would be much better, weather-wise. How wrong can one be! I have even received some "fan mail" calling my attention to that statement. This time I'm going to keep my big fat mouth closed and not say anything about the February weather --or the March weather either. However, I will stick my neck out and say April will really be good weather, especially in Florida (where I expect to spend the month of my vacation).

I regret the cancellation of the antenna program which had been scheduled for March 12. Max Galloway, K90XA, was afraid he didn't have a good enough program planned so he requested to be relieved of the speech at this time. I talked to Ron Williams, W9JVF, and he consented to take the program, but at the last minute he had to go to Michigan, and his program went by the wayside. So that we would have a program I journeyed over to the telephone office and picked up a film I was sure everyone would like, entitled "Sky Watch on 55 Degrees." It was a Mid-Canada Warning Line film.

During the month of April, Dick Kimmett, K9VIE, will handle the meetings, etc., so everything is in the good hands of our V. P.

Two future meetings I wish to call to your attention are the following: March 26th there will be no meeting at the clubroom, but there will be a gathering of the group at the Indianapolis Power and Light Co. plant at 1234 W. Morris St., for a trip through the power plant. Please be there no later than 7:45 p.m. so that we may get started on time. Also, the meeting originally scheduled for the State Police to give their talk on Micro-wave (which meeting was snowed out) has been rescheduled for April 9th at the clubroom. We are going to impose on Dick, K9VIE, to have an interesting meeting for you on April 23rd.

Of course the May meetings include Home Brew Night and the Swap and Shop Nights. These I know you won't forget.

So until I return from the sunny south, I wish all of you happy hamming--and don't forget to look for me on the air

waves, calling you all from Florida.

Your Prez.  
Curly Brouse, K9JSF

\* \* \* \* \*

IT'S UP THAR!

ARRL OFFICIAL BULLETIN NR 996 March 11 1965

Oscar Three was successfully launched into orbit at 1830 GMT March 9. It is in an essentially circular orbit at an altitude of 502 miles, with an inclination of 70 degrees and an orbital period of 103.5 minutes. The translator passband is approximately 10 kc. lower than originally planned. A confirmed contact between K9AAJ and K2IEJ was reported on the thirteenth orbit, as well as numerous contacts between other call areas. European contact between HB9RG and DL6EZA has also been established. W6EE, the Oscar station, transmits corrected orbital data at 0000 and 0100 GMT on sideband, followed by RTTY then CW on 3810, 7205, 14,300, 7040, 14,080, 7015 and 14,030 kc. From 0400 to 0700 GMT W6EE will be on 3810 to collect information. Mail reports should go to Project Oscar, Foothills College, Los Altos, California. W1AW will continue to carry latest Oscar information as received.

(Ama-Chewer editor's note: On page 5 of this issue is additional information on Oscar bulletin frequencies received from Oscar Headquarters before the satellite was launched. Some of the times and frequencies differ from those reported by the ARRL in the above bulletin.)

\* \* \* \* \*

## PUZZLE

R. F. Burns, one of our local home-brew enthusiasts, made a trip to one of the radio stores and purchased a length of insulating tubing and a cadmium sulphide photo-cell. He was told his purchase totaled \$1.05, and the photo-cell cost a dollar more than the tubing.

Quick, now, how much did the tubing cost?

Answer appears elsewhere in this issue.





#### PROGRAM REVIEW

By Jerry Lucas W9APJ

Feb. 12

Jerry Zimmerman furnished the program for this meeting. Jerry is the weatherman for WFBM-TV, and a member of the American Meteorological Society, an ex-major in the U. S. Air Force, and has served as weatherman for TV stations in Alaska and Texas. You can rest assured he knows his subject, and gave us an enlightening and entertaining talk.

Jerry began by stressing the importance of the weather to fishermen, factories, amusement parks, and even banks, then went on to tell of the effects the weather has on human behavior.

Although we think the world is pretty well covered by weather stations, he said all the existing stations could actually cover an area about one-half the size of Indiana. He told of the importance of the Nimbus satellite which relays to earth two billion bits of information each 24 hours, and said weather technology is advancing so fast he spends three to four hours a day keeping up with the advances in the state of the art.

In closing he predicted the last killing frost would occur

on or before April 21, and May 30 would be cool and dry.

Feb. 26

It snowed. We all stayed home. The state police program scheduled for this date has been rescheduled for April 9.

\* \* \* \* \*

#### OSCAR INFORMATION BULLETINS

Frequencies for the operation of W6EE at Oscar Tracking and Communications Headquarters, Foothill College, Los Altos Hills, Calif., are:

SSB: 3810, 7205, and 14,300 kc.  
CW: 3507.5, 7015, and 14,030 kc.  
RTTY: 3620, 7040, and 14,080 kc.

Generally, SSB prediction broadcasts will start on the hour, CW at 15 minutes after the hour, and RTTY on the half-hour.

Oscar officials hope to have W6EE on the air from 1600 GMT to 0500 GMT daily during Oscar III's life. The station will broadcast orbit predictions and other information regarding the operation of the amateur radio translator satellite.

\* \* \* \* \*

#### STUDY MATERIAL

Looking for some good text books on electronics? An eight-volume set of texts prepared for the Navy Electronics Technician School, Class A, is available from the U. S. Government Printing Office for \$14.25. The books are loose leaf plastic bound and cover basic electricity, power supplies and amplifiers, transmitters, receivers, oscilloscopes, microwave circuits, and electromagnetic circuits and devices. The set is titled "Fundamentals of Electronics."

\* \* \* \* \*

What is your purpose in amateur radio?

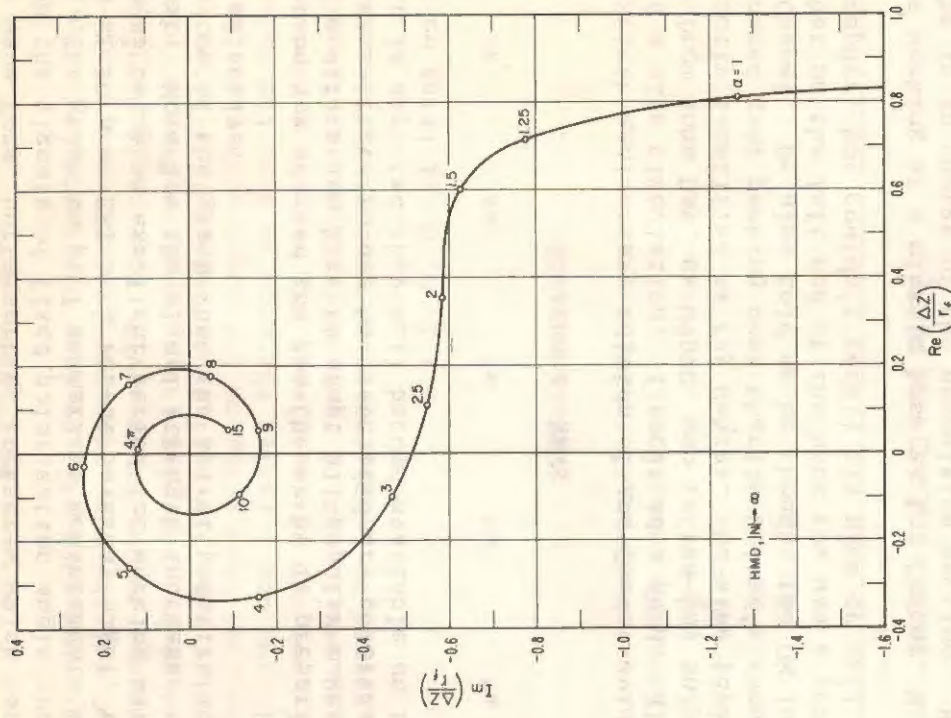


As we all are painfully aware, the amateur bands are becoming more and more crowded, with resultant high levels of interference. The use of suitable measuring equipment will show that the number of stations using the same frequency on the HF bands is directly proportional to the third power of the Greenwich Mean Time of operation. New techniques for dealing with this severe interference situation are being tried by many experimenters, and the Ama-Chewer is fortunate to be able to print here a brief description of a new polarization method worked out by Thomas O. Matson, WØXAF.

Mr. Matson relates that in studying propagation conditions and interference levels, especially on 40 and 80 meters where the situation seems to be worst, if not more so, he found the normal changes in polarization, antenna height, radiation angle and beam azimuth could not be hoped to bring much relief to the beleaguered operator. This is mainly due to the fact that antenna sizes and support structures for these bands are too large and cumbersome to be moved easily by the average ham, so most ops must put up with whatever beam azimuth, radiation angle, etc., that their situation allows.

However, it appeared probable to Mr. Matson that a change in at least one of these parameters might produce at least a little relief from the intense interference and allow a reasonably skilled operator using medium power to carry on a QSO over normal propagation paths for a moderate amount of time. Changing the polarization of the transmitted signal appeared to be the best approach. However, with so many dipoles and vertical antennas in use on these bands, there already are a large number of signals of both horizontal and vertical polarization existing. To ask them to move seems out of the question. Also, the chances of a horizontally-polarized signal and a vertically-polarized signal appearing on the same frequency at the same time has been shown by earlier studies to be approximately equivalent, and in any case, greater than the random variation.

The problem then easily resolved itself into a matter of finding a method of polarizing a transmitted signal so it will not interfere with nor be interfered with by these horizontal and vertical signals. There must be a way of making a signal "slip through" between the horizontal and vertical



signals, as it were. By modifying the modulator of his BC-7372-J hypercom mobilizer transmitter to produce a uniformly varying phase angle, and feeding a portion of this varying signal, through a voltage divider, to his horizontally-mounted antenna rotor, Mr. Matson has succeeded in propagating a signal that fits the requirements aforesaid. He calls this significant breakthrough in amateur technique "Spiral Polarization."

As its name indicates, Spiral Polarization is a combination of vertical and horizontal polarization, with the polarization angle continually varying from horizontal to vertical and back again. Consequently, the radiated signal is not a

(cont'd next page)



simple wave form, but a sort of corkscrew which can wiggle through the signals of fixed polarization angle very effectively. The graph on p. 7 summarizes measurements made by Mr. Matson at 10 p.m. EST on a recent Saturday night, a time chosen as being an excellent period for working with QRM at its best. Note how the signal strength increases rapidly at the top of the graph when the spiral polarization becomes fully effective.

Mr. Matson has advised the Ama-Chewer he is preparing a series of modification kits to adapt all popular makes of amateur transmitters to use his revolutionary polarization method. It is expected they will become available on the retail market on April 1.

\* \* \* \*

#### ALUMNI NEWS

Our fiftieth anniversary edition of Ama-Chewer evidently enjoyed a wide circulation. I received a phone call recently from John Day, ex-W9DVO, who is the guy on page 10 incorrectly identified as Fay Gehres. He also identified the unnamed gent peeking over Charlie Soltau's shoulder as Irvin Chapel. He also told me he thought the OM in the black hat on the left end of the back row was a portrait photographer, but couldn't recall his name or call.

John is working at a missile base at Los Cruces, N. Mex., where he is in charge of the propulsion section. He has been there about a year, and before that was at White Sands about 12 years.

For the benefit of those who recall John and would like to write him, his mailing address is RFD 1, Box 848, Los Cruces, N. Mex. 88001.

--Jerry W9APJ

\* \* \* \*

#### HAM-AD

SELL -- Finco 6 & 2 meter beam with coax balun, \$20; Spaulding 32-foot tower, \$30 (or make it \$20 if you dig up the culvert base!) K9KTL, LI 7-8148, 3514 N. Riley

WHY? WHY? WHY?

Why is it some guys will go into their shacks, flip on the xmtr, but not the rcvr, apparently, and beller into the mike, "Anyone on the frequency?" They could tell whether anyone is on by listening for a minute. Even on six FM, occasionally some lid will break into a 12-station roundtable that has been going on for hours with this inane remark. If you can't resist the urge to hear the dulcet tones of your own voice, please OM, wire in a time delay relay so you can't turn on your xmtr until a minute after the rcvr is turned on. Ugh, makes me want to spit on the cat.

T. O. M. jg

\* \* \* \*

#### PUZZLE ANSWER

Let X = cost of tubing

Then  $X + 100 = \text{cost of cell}$

And  $X + X + 100 = 105$

$2X + 100 = 105$

$2X = 5$

$X = 2.5$

\* \* \* \*

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Gene-W9KJF

Chuck-K9UDW

Jim-Wn9MXX

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The recent death of Harry Smith, W9TT, was a sad event for all hams who knew him. But it is a pleasure to know one of his most admired projects, the River Forecast Net, is continuing.

Ed Healy, W9FJR, at this writing is acting as temporary net control for the RFN, pending the appointment of a new Route Manager for the net. He is encouraging all with an interest in CW operation to check into the net so it may continue. Not only will this continuing operation be a fitting tribute to the memory of W9TT from his fellow hams, but it will be recognition of a very worthwhile public service project which should not be allowed to falter.

The net meets on 3656 kc. and begins at 1300 GMT (8 a.m. EST) each Sunday. Stations checking in report weather conditions at their location, river stages when needed, and are available to handle other traffic as well.

Ed reports the net started back around 1937 during a serious Ohio River flood. He will be glad to hear of your interest and to answer any questions or take any suggestions on the future of this net. Some "modern" hams may scoff at the usefulness of such an amateur operation, saying that with all the police and commercial facilities available, there is no need for hams to bother with this sort of thing. However, when any emergency occurs, the police and commercial operators generally have their hands full and are happy to have assistance from hams, especially if the hams are ORGANIZED beforehand so they can swing into action right away when needed.

Net sessions and emergency drills may seem boring and childish, but when something big happens, all the advance preparation and practice pays off in increased operator proficiency.

Incidentally, another enthusiastic Indianapolis traffic operator has been appointed to fill W9TT's place as Route Manager for QIN, the state CW traffic net, which meets daily at 0000 GMT on 3656 kc. Mike Wetzel, WA9BWY, is the new holder of this position. This is a big job for a young operator, but Mike has been showing his interest in traffic work by spending a lot of time on the nets and deserves your support.

Official Bulletin Nr 994 Feb 25 1965  
FCC has adopted reciprocal operating rules for foreign amateurs effective March 29. Application will be made sixty days in advance on new Form 610-A, available on March 29 from FCC offices and from some U. S. offices overseas.

Copies of the home station and operator licenses must be furnished. A U.S. address must be given, and if mobile operation is intended, a rough itinerary. Permits will be issued for a maximum of one year at a time, from the Washington FCC office. Visitors will sign their home calls in English, followed by the appropriate U. S. prefix, giving actual location once during each contact. Full details will appear in April QST.

Official Bulletin Nr. 995 Mar 4 1965

The Dominican Republic and the United States have agreed to permit reciprocal operating by amateurs of one country while in the other. U. S. amateurs apply in Spanish to the Director General of Telecommunications, Santo Domingo. Dominican amateurs apply under rules of Subpart G, effective March 29, on FCC Form 610-A. This agreement and a previous one with Costa Rica are under the authority of public law 88-313, which was S-920. Other agreements are being negotiated. Full details will appear in April QST.

\* \* \*

### GRAHAMS SPECIALS OF THE MONTH

Collins 32S1 Xmtr.	-----	\$445.00
Collins 75S1 Receiver	-----	\$375.00
Hallicrafter SX-122 Receiver	-----	\$245.00
Hallicrafter SX-100 Receiver	-----	\$179.00
National NCX-3 Transceiver	-----	\$295.00
National NC-155	-----	\$142.00
National HRO 50-T	-----	\$149.00
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Globe VHF 62 Transmitter	-----	\$ 78.00
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